VARIABLE TORSIONAL DAMPER HAVING MAGNETO-RHEOLOGICAL FLUID DAMPING IN PARALLEL WITH A SPRING DAMPER

ABSTRACT OF THE DISCLOSURE

A variable torsional damper rotatably supported for translating torque between a prime mover and the input of a transmission. The variable torsional damper includes a torque input member operatively connected for rotation with the power take off of a prime mover, an output member operatively connected for rotation with the input to a transmission and a plurality of damping members interposed between the input member and the output member. The damping members act to translate torque between the input member and the output member to dampen torsional forces generated between the prime mover and the transmission. A magneto-rheological damper assembly is disposed in parallel with the damping members and is adapted to operatively vary the hysteresis between the input member and the output member of the variable torsional damper.